Assignment 6

Due: Dec. 3rd, 2018 at 1:59 pm

Question 1: (20 points)

This assignment should be written with Rmarkdown. When you submit it, please submit both Rmarkdown output and your .rmd file

Question 2: 3D surface (40 points)

In this question, you are required to generare a 3D surface using command from package rgl.

1. Investigate how to use rgl.surface() and plot a simple example (such as a square or a triangle).
2. Select an equity and generate a 3D surface for the realized volatility. Here is the input for three axis:
   (a) Volatility value.
   (b) Length of training data sets (at least 5 different length.)
   (c) Date (5 consecutive days)

Question 3: Candlestick chart(20 points)

Download 1 month length of equity daily data and generate a candlestick chart using ggplot functions. Use green color if daily close price is lower than open price. Otherwise, use red color. Make sure you have the right legend attached with the plot.

Question 4: Labeling points in a scatter plot (20 points)

For this question, you need to install package gcookbook and use the table "countries"

1. Make a scatter plot for countries which has "healthexp" value larger than 2,000 and year in 2009. In this scatter plot, using "infmortality" as X input and "healthexp" as Y input.
2. Add labels for two countries: The current country you are living, and the country where you from. (If not applicable, just select another country which exists in the selected data sets.)

In class exercise: Correlation plot (0 points, but if fail to answer or solve, I will deduct 10 points)

Download 10 different equity daily data and calculate 1-year length of daily log return. In the end, generate a correlation plot based on your data set.